

REMARKS

Three Dimensional Substrate

The Office Action requested that Applicant claim features that more distinctly define the term “three dimensional.” Applicant has amended the claims to define the term “three dimensional substrate” as having an intentionally formed decorative surface that includes at least one surface selected from the group consisting of a tapered edge surface, a groove surface, a bevel surface, and a stepped surface. Support for this amendment can be found in paragraphs 9-11 and 88 and Figure 1.

Claim Objections

Claim 57 has been canceled.

Claim Rejections - 35 USC § 112

Applicant has amended the range “less than thirty-five feet per minute” to “less than thirty-five feet per minute and greater than twenty feet per minute” without prejudice or disclaimer.

Claim Rejections - 35 USC § 102 and § 103

The Office Action rejected claims 1, 4-7, 12, 13, 32-35, 52, 53, 56-58, and 64 as anticipated by U.S. Patent Application Publication Number 2003/018166 to Hasenour et al. The Office Action rejected claims 1-5, 7-13, 18, 20-22, 28, 32-35, and 39-65 as obvious in view of Hasenour et al. and U.S. Patent Number 5,989,638 to Nielsen. The Office Action rejected claims 1, 4, 5, 6, 53 and 56 as obvious in view of U.S. Patent Number 6,268,022 to Schlegel et al. The Office Action rejected claims 2, 3, 59-62 and 65 as obvious in view of Hasenour et al. The Office Action rejected claims 14-17 as obvious in view of Hasenour et al. and U.S. Patent Number 6,231,931 to Blazey et al. The Office Action rejected claims 23-27 as obvious in view of Nielsen, Hasenour et al. and U.S. Patent Number 5,478,014 to Hynds. The Office Action rejected claims 29-31 as obvious in view of Nielsen, Hasenour et al. and U.S. Patent Number 5,290,598 to Myers et al. The Office Action Rejected claim 37 as being obvious in view of Nielsen, Hasenour et al. and U.S. Patent Number 5,669,974 to Cueller et al. The Office Action

rejected claims 36 and 38 as being obvious in view of Nielsen, Hasenour et al., Cueller et al., and U.S. Patent Application Publication Number 2002/0033134 to Fannon.

Independent Claim 1

Amended claim 1 features a process for coating a three-dimensional cabinet substrate that has an intentionally formed decorative surface that includes a tapered edge surface, a groove surface, a bevel surface, and/or a stepped surface. A coating material comprised of 100 percent solids material is applied to the three-dimensional cabinet substrate while the three-dimensional cabinet substrate is moving at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute to provide a uniform thin film coating that is 0.0015 inches thick or less.

Amended claim 1 is not anticipated by Hasenour et al., because claim 1 recites features that are not disclosed or suggested by Hasenour et al. For example, Hasenour et al. does not disclose or suggest applying a coating material to a cabinet substrate while the cabinet substrate is moving at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute to provide a uniform thin film coating that is 0.0015 inches thick or less. To the contrary, Hasenour et al. suggests that moving an article through a spray chamber at slower speeds of thirty-five feet per minute or less causes an undesirable “plastic” look, not a uniform thin film coating that is 0.0015 inches thick or less as claimed. Hasenour et al., col. 6, ll. 44-53. Claim 1 is not anticipated by Hasenour et al.

Amended claim 1 is not obvious in view of Hasenour et al. and Nielsen. As the Office Action points out, Nielsen fails to disclose moving the substrate at thirty-five ft/min. In fact, Nielsen does not disclose any speed. If one having skill in the art had the Hasenour et al. and Nielsen references before him, the only teaching of how fast the substrate should be conveyed is disclosed by Hasenour et al. However, Hasenour et al. clearly teaches away from moving a three-dimensional substrate at speeds below thirty-five feet per minute to obtain a uniform thin film coating that is 0.0015 inches thick or less. As the Office Action suggests, a coating that is too thick results when speed is too low. Hasenour et al. teaches that the coating is plastic looking, i.e. too thick, when the substrate is moving too slowly at speeds of thirty-five feet/minute or less. Clearly, this teaching of Hasenour et al. would motivate one having ordinary skill in the art to move the substrate at speeds that are faster than thirty-five feet per minute, such

as the disclosed range of 50-300 feet, not speeds that are slower than thirty-five feet per minute. Further, Applicant respectfully submits that the process parameter of moving speed of a *three-dimensional* substrate is not a known result effective parameter. The combined teachings of Hasenour et al. and Nielsen do not suggest applying a coating material comprised of 100 percent solids material to a three-dimensional cabinet substrate while the three-dimensional cabinet substrate is moving at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute to provide a uniform thin film coating that is 0.0015 inches thick or less. Claim 1 is non-obvious in view of Nielsen and Hasenour et al.

Amended claim 1 is not obvious in view of Schlegel et al., because amended claim 1 includes several features that are not shown or suggested by Schlegel et al. For example, Schlegel et al. does not disclose or suggest applying a uniform thin film coating that is 0.0015 inches thick or less by moving a three-dimensional substrate at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute.

Schlegel et al. discloses a method for electrostatic powder coating. There is no indication that the electrostatic powder coatings disclosed by Schlegel et al. can be 0.0015 inches thick or less. To the contrary, Schlegel et al. states that “[p]owder coatings are relatively thick, i.e., typically being between 3 and about 10 mils thick.” Schlegel et al., col. 4, ll. 13-16. As the Office Action points out, Schlegel et al. fails to disclose the speed being less than thirty-five feet per minute. In fact, Schlegel et al. does not disclose any speed, and clearly does not suggest that a speed between twenty and thirty-five feet per second would result in a uniform thin film coating that is 0.0015 inches thick or less.

The Office Action asserts that the process parameter of moving speed of the substrate relative to the spray nozzle is a known result effective variable and explains that if speed is too low it would result in coating too thick and too high a speed would result in too low a thickness. Applicant respectfully points out that there is no indication in Schlegel et al. that the thickness of *electrostatic powder coatings* can be controlled by controlling the speed of an electrostatically charged substrate past an electrostatic paint gun. As such, applicant respectfully submits that the Office Action has not established that the process parameter of moving speed of a substrate relative to a spray nozzle is a known result effective variable in electrostatic powder coating systems. Clearly, the Schlegel et al. patent does not suggest applying a coating material

comprised of 100 percent solids material to a three-dimensional cabinet substrate while the three-dimensional cabinet substrate is moving at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute to provide a uniform thin film coating that is 0.0015 inches thick or less. Claim 1 is in condition for allowance.

Claims 3-18 and 20-39 depend from claim 1 and are allowable for at least the reasons claim 1 is allowable.

Independent Claim 40

Amended claim 40 is directed to a process of coating a wood substrate with a coating material comprised of 100 percent solids material. In the method, the 100 percent solids material is atomized. A stream of the atomized coating material is heated to between about 80 degrees Fahrenheit and about 160 degrees Fahrenheit. The atomized coating material is applied to the wood substrate while the wood substrate is moving at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute to provide a uniform thin film coating that is 0.0015 inches thick or less of the coating material on the substrate.

Amended claim 40 is not obvious in view of Hasenour et al. and Nielsen, because claim 40 includes features that are not shown or suggested by Hasenour et al. or Nielsen. For example, Hasenour et al. and Nielsen do not disclose or suggest applying an atomized coating material to a wood substrate while the wood substrate is moving at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute to provide a uniform thin film coating that is 0.0015 inches thick or less of the coating material on the substrate. Claim 40 is non-obvious in view of Nielsen and Hasenour et al.

Claims 41-45 depend from claim 40 and are allowable for at least the reasons that claim 40 is allowable.

Independent claim 46

Amended claim 46 is directed to a process for coating a three-dimensional cabinet substrate having an intentionally formed decorative surface that includes a tapered edge surface, a groove surface, a bevel surface, and/or a stepped surface. In the method, the coating material is supplied to one or more spray guns. The material is atomized and applied to the three-

dimensional cabinet substrate while the substrate is moving at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute to form a uniform wet build of coating material. The atomized coating is dried on the three-dimensional substrate to form a uniform dry build of coating material. The wet build of coating material and the dry build of coating material are substantially equal and each 0.001 inches or less thick.

Amended claim 46 is not obvious in view of Hasenour et al. and Nielsen, because claim 46 includes features that are not shown or suggested by Hasenour et al. or Nielsen. For example, Hasenour et al. and Nielsen do not disclose or suggest applying a coating material to a three-dimensional cabinet substrate while the substrate is moving at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute to form a uniform wet build of coating material that is dried to form a uniform dry build of coating material, such that the wet build and the dry build are substantially equal and are each 0.001 inches or less thick. Amended claim 46 is non-obvious in view of Nielsen and Hasenour et al.

Claims 47 and 48 depend from claim 46 and are allowable for at least the reasons that claim 46 is allowable.

Independent Claim 49

Amended claim 49 is directed to a process for coating a wood three-dimensional component having an intentionally formed decorative surface that includes a tapered edge surface, a groove surface, a bevel surface, and/or a stepped surface. In the method, a coating material comprised of one hundred percent solids material is supplied to one or more spray guns. The spray guns atomize the coating material and dispense the atomized coating material onto the wood three-dimensional substrate while the three-dimensional substrate is moved at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute. A temperature of the atomized coating material is measured when dispensed and the temperatures of the dispensed coating material is controlled such that it is between about 80 degrees Fahrenheit and about 160 degrees Fahrenheit. The temperature of one or more input streams to the one or more guns is changed based on the temperature of the atomized coating material that is dispensed.

Claim 49 is not obvious in view of Nielsen and Hasenour et al., because claim 49 includes features that are not shown or suggested by Nielsen or Hasenour et al. For example, Nielsen and Hasenour et al. do not disclose or suggest changing the temperature of one or more

input streams to one or more spray guns based on the temperature of atomized coating material that is dispensed. Claim 49 is in condition for allowance.

Claim 50 depends from claim 49 and is allowable for at least the reasons that claim 49 is allowable.

Independent claim 51

Amended claim 51 is directed to a process for coating a wood three-dimensional cabinet substrate. Claim 51 is allowable for at least the reasons claim 46 is allowable.

Independent claim 52

Amended claim 52 is directed to a process for coating a wood three-dimensional substrate having an intentionally formed decorative tapered edge surface, groove surface, bevel surface, and/or stepped surface. In the method, a substantially solvent free coating material is applied to the wood three-dimensional substrate while the three-dimensional substrate is moved at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute to provide a uniform thin film coating that is 0.0015 inches thick or less on the three-dimensional substrate. Claim 52 is not anticipated by Hasenour et al. and is not obvious in view of Hasenour et al. and Nielsen. Claim 52 is in condition for allowance.

Independent claim 53

Amended claim 53 is directed to a process for coating a three-dimensional cabinet substrate having an intentionally formed decorative tapered edge surface, groove surface, bevel surface, and/or stepped surface with a substantially recyclable coating material. In the method, a coating material is applied to the wood three-dimensional substrate while the three-dimensional substrate is moved at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute to provide a uniform thin film coating that is 0.0015 inches thick or less on the three-dimensional substrate. Amended claim 53 is not anticipated by Hasenour et al., is not obvious in view of Hasenour et al. and Nielsen, and is not obvious in view of Schlegel et al. Claim 53 is in condition for allowance.

Independent claim 54

Amended claim 54 is directed to a process for coating a three-dimensional cabinet substrate having an intentionally formed decorative surface that includes a tapered edge surface, a groove surface, a bevel surface, and/or a stepped surface. In the method, a coating material is applied to the three-dimensional cabinet substrate while the substrate is moving at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute to form a uniform wet build of coating material. The coating material is dried on the three-dimensional substrate to form a uniform dry build of coating material. The wet build of coating material and the dry build of coating material are each 0.001 inches or less thick.

Amended claim 54 is not obvious in view of Hasenour et al. and Nielsen, because claim 54 includes features that are not shown or suggested by Hasenour et al. or Nielsen. For example, Hasenour et al. and Nielsen do not disclose or suggest applying a coating material to a three-dimensional cabinet substrate while the substrate is moving at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute to form a uniform wet build of coating material that is dried to form a uniform dry build of coating material, such that the wet build and the dry build are each 0.001 inches or less thick. Amended claim 54 is non-obvious in view of Nielsen and Hasenour et al.

Claim 55 depends from claim 54 and is allowable for at least the reasons claim 54 is allowable.

Independent Claim 56

Amended claim 56 is directed to a process for coating a wood three-dimensional substrate having an intentionally formed decorative surface that includes a tapered edge surface, a groove surface, a bevel surface, and/or a stepped surface. In the method, a coating material comprising approximately 25 percent or less solvent is applied to the wood three-dimensional substrate while the three-dimensional substrate is moved at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute to provide a uniform thin film coating that is 0.0015 inches thick or less on the three-dimensional substrate. Amended claim 56 is not anticipated by Hasenour et al., is not obvious in view of Hasenour et al. and Nielsen, and is not obvious in view of Schlegel et al. Claim 56 is in condition for allowance.

Claims 58 and 60 depend from claim 56 and are also in condition for allowance.

Independent Claim 61

Amended claim 61 features a process for coating a three-dimensional wood cabinet substrate that has an intentionally formed decorative surface that includes a tapered edge surface, a groove surface, a bevel surface, and/or a stepped surface. A coating material comprised of 100 percent solids material is applied to the three-dimensional cabinet substrate while the three-dimensional cabinet substrate is moving at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute to provide a thin film coating that is 0.0015 inches thick or less. Claim 61 is not obvious in view of Nielsen and Hasenour et al.

Claims 62 and 63 depend from claim 61 and are also in condition for allowance.

Independent Claim 64

Amended claim 64 features a process for coating a three-dimensional substrate that has an intentionally formed decorative surface that includes a tapered edge surface, a groove surface, a bevel surface, and/or a stepped surface. A coating material comprised of 100 percent solids material is applied to the three-dimensional cabinet substrate while the three-dimensional cabinet substrate is moving at a speed that is less than thirty-five feet per minute and greater than twenty feet per minute to provide a thin film coating that is 0.0015 inches thick or less. Claim 64 is not anticipated by Hasenour et al. and is not obvious in view of Nielsen and Hasenour et al. Claim 64 is in condition for allowance.

Applicants respectfully submit that all pending claims now allowable.

Respectively submitted,

Dated: November 20, 2006

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